

# THE DER WEEKLY

www.eren.doe.gov/der

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March 1, 2002

## Distributed Energy Resources...the Power of Choice

### ● Industry News

#### San Francisco Airport Installs Solar

The San Francisco International Airport announced that it has installed building integrated photovoltaic (PV) panels on the facility's roof. The 20-kW array is grid-connected and has a software monitoring system that displays the daily energy output, emissions offset, and money saved by the energy system. It can produce electricity both on sunny and on cloudy days. The system was designed and installed by Renewable Energy Resources, using UNI-SOLAR® PV laminates that were manufactured by Bekaert ECD Solar Systems.

*Energy Info Source, February 28*

### ● State News

#### Ohio DG Seminar and Trade Show

More than 300 people attend the Ohio Department of Development's Distributed Energy Generation Seminar and Trade Show in Columbus on February 4. Much of the meeting focused on net metering tariffs recently filed by the state's utilities. Several of the state's investor-owned utilities (IOUs) participated in the meeting and supplied copies of their net metering tariffs to interested parties. In public discussions at the conference, residential customer feedback on the IOUs' net metering programs to date was generally favorable, while some small commercial customers complained that utilities were still unfairly applying demand charges to net metering customers.

*IREC Interconnection Newsletter, February/March 2002*

### ● DOE News

#### District Heating by Truck, a New Technology

A new technology, developed in Germany, stores waste heat in containers and conveys it by truck to the consumer where it is released for building heating purposes. The system, called Transheat, has been deployed cost-effectively at six sites in Germany, France, and The Netherlands. The containers are filled with 23 tons of phase change material and charged at 158 degrees Fahrenheit by a contained system of pipes bubbling hot oil through the medium. Each container can hold 3.5 MW of heat. Because the system uses unwanted process heat, it results in a reduction of primary energy and CO<sub>2</sub> emissions. On February 26, the technology was presented to a DOE audience

in a seminar organized by Imre Gyuk and Merrill Smith, the Office of Distributed Energy Resources.

#### Turbine Power Systems Conference

On February 25, in Galveston, Texas, Stephen Waslo of the Chicago Operations Office presented an overview of turbine activities under the Office of Distributed Energy Resources. The Turbine Power Systems Conference was sponsored by the National Energy Technology Laboratory, Electric Power Research Institute, Gulf Coast Power Association, Gas Turbine Association, and The Boyce Consultancy.

#### DER Conference in Philly

The Mid-Atlantic Distributed Energy Resources (DER) Workshop, sponsored by the DER office and Philadelphia Regional Office, was held in Philadelphia, Pennsylvania, on February 21 and 22. The purpose of the workshop was to gather recommendations on the regional implementation needs of DER, and how the U.S. DOE can collaborate with industry and government agencies to meet these needs. The workshop's presenters summarized industry perspectives and case studies. There were also several facilitated breakout sessions that discussed specific implementation topics including barriers and issues, needs and opportunities, and strategies for top opportunities. More than 100 people attended the workshop.

#### Fuel Cell Report to Congress

A workshop, Fuel Cell Report to Congress, was held on February 21-22 in Washington, DC, in response to requirements included in the FY 2002 Interior Appropriations bill (HR 2217). The Act requires the Department of Energy to report within twelve months to the House and Senate Committees on Appropriations the technical and economic barriers to the use of fuel cells in transportation, portable power, stationary, and distributed generation applications. This report must include recommendations on program adjustments based on an assessment of the technical, economic, and infrastructure requirements needed for the commercial use of fuel cells by the year 2012 for stationary and transportation applications. Within six months of the date of enactment of the bill, the Department must also provide an interim assessment that describes preliminary findings about the need for public and private cooperative programs to demonstrate the use of fuel

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*According to a study conducted by the U.S. Public Interest Research Group, Maine has the potential to generate 95 percent of its electricity from renewable energy resources.\**

*The DER Weekly, March 1, 2002*

## Energy Department and States Team Up on Clean Energy Research

On February 27, Secretary of Energy Spencer Abraham awarded 14 cooperative agreements totaling nearly \$10.5 million to develop and advance clean energy technologies. Final award amounts are being negotiated with the winning state energy offices, energy associations, and universities.

“The President’s National Energy Plan challenges us to develop the technological know-how to meet this Nation’s energy challenges to help expand our economy, meet the needs of a growing population, and raise the American standard of living,” Secretary Abraham said. “These partnerships will help move the Nation to meet that goal.”

Several of the projects pertain to DER including:

**Testing and Application in Mission-Critical Settings and Transmission, Siting, and Metrics Models Research** – The National Association of State Energy Officials in Alexandria, Virginia, will focus on testing, evaluating, and developing metrics for the use of clean, distributed generation in urban infill and other critical sites. The project will address efficiency, reliability, and environmental issues associated with distributed generation in mission-critical areas; promote the use of alternative distributed generation fuel sources; educate consumers; and research and validate distributed generation guidelines and transmission/interconnect technical data. The award amount is \$355,000, subject to negotiation.

**Collaborative National Program for the Development and Performance Testing of Distributed Power Technologies with Emphasis on Combined Heat and Power Applications** – The Association of State Energy Research and Technology Transfer Institutions in Madison, Wisconsin, will facilitate the collaborative development and deployment of microturbine generators, small industrial turbines, fuel cells, and other advanced distributed generation technologies. The project will emphasize environmentally beneficial combined heat and power applications of distributed generation technologies because of their great potential for increasing efficiency and reducing emissions. The award is \$1 million, subject to negotiation.

**Texas Liquefied Petroleum Gas Fuel Processor Development and Fuel-Cell Demonstration** – The Texas State Energy Conservation Office in Austin, Texas, will develop two optimized liquefied petroleum gas fuel processors, integrate the processors into 5-10 kW proton exchange membrane fuel cell prototypes, independently test both prototypes, and perform a field demonstration. The project will be accompanied by a market study and public education campaign. The award amount is \$500,000, subject to negotiation.

**Building Integrated Distributed Power Systems: Test, Evaluation, Demonstration and Workforce Development** – The state of Florida will address distributed power systems including fuel cells, microturbines, photovoltaics and battery storage and assess their effects on electric utility system reliability over large-scale grid networks. The award amount is \$999,999, subject to negotiation.

**A High Technology Centrifugal Compressor for Commercial Air Conditioning Systems** – The state of Connecticut will develop a high technology, oil-free, energy efficient centrifugal compressor called CENVA for commercial air conditioning systems. The award amount is \$999,991, subject to negotiation.

cells in commercial applications. Information from workshop is now posted at [www.sentech.org](http://www.sentech.org). This information includes handouts, speaker presentations and remarks, and breakout group presentations. Detailed summaries of the breakout group discussions will be posted soon.

## Funding Opportunities

The Department of Energy’s (DOE) National Energy Technology Laboratory is seeking applications on behalf of the Office of Power Technologies in DOE’s Office of Energy Efficiency and Renewable Energy, for support of projects that

- are consistent with the goals of the Advanced Natural Gas Reciprocating Engine Program. This solicitation requests applications only from U.S. universities and colleges for research activities that will make a significant impact in achieving the program goals. In order to attain these goals, innovative and novel concepts need to be developed and current obstacles need to be overcome. For more detailed information about the solicitation, visit [www.netl.doe.gov/business/solicit/index.html](http://www.netl.doe.gov/business/solicit/index.html).

- The US Army Corps of Engineers Engineer Research and Development Center, Construction Engineering Research

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*The study calculated potential renewable energy generation in 20 states using data from the Union of Concerned Scientists, government agencies, and laboratories.\**

## Calendar of Events

MARCH 2002			
4-8	Design of Low Emission Gas Turbine Combustors	Irvine, CA	<a href="http://www.uci.edu/GTESC/">www.uci.edu/GTESC/</a>
7	Fuel Cells Costs/Benefits	Ramapo, NJ	Energy Star/Fuel Cell meeting, Athena Sarafides; 609-633-1161
7-8	Distributed Generation	South San Francisco, CA	<a href="http://www.aeecenter.org/seminars">www.aeecenter.org/seminars</a>
11-13	6th Annual Distributed Generation & On-Site Power Conference	Atlanta, GA	<a href="http://www.dist-gen.com">www.dist-gen.com</a> ; (508) 427-9470; <a href="mailto:gesi@mediaone.net">gesi@mediaone.net</a>
12	National Energy Modeling System/ Annual Energy Outlook Conference	Washington, DC	<a href="http://www.eia.doe.gov/oiaf/aeo/conf/">www.eia.doe.gov/oiaf/aeo/conf/</a>
12-14	DOE Gas Turbine and Microturbine Programs Peer Review	Fairfax, VA	<a href="http://www.eren.doe.gov/der/microturbines/news_events.html">www.eren.doe.gov/der/microturbines/news_events.html</a>
13-15	Power System 2002 Conference: Impact of Distributed Generation	Clemson, SC	<a href="http://www.ces.clemson.edu/powsys2002/main.htm">www.ces.clemson.edu/powsys2002/main.htm</a>
14-15	Fundamentals of Energy Management	Las Vegas, NV	<a href="http://www.aeecenter.org/seminars">www.aeecenter.org/seminars</a>
17-21	EPRI's 7th Distributed Resources Conference and Expo	Dallas, TX	<a href="http://www.epri.com/programHigh.asp?program=238295&amp;objid=266151">www.epri.com/programHigh.asp?program=238295&amp;objid=266151</a>
19-21	Electric Power 2002	St. Louis, MO	<a href="http://www.electricpowerexpo.com">www.electricpowerexpo.com</a>
20-23	Building Energy Conference	Medford, MA	<a href="http://www.nesea.org">www.nesea.org</a> ; (877) 44-SOLAR, ext. 20
22	Indiana/Caterpillar CHP Workshop	Indianapolis, IN	Ethan Rogers, (317) 232-8961
25-26	Fundamentals of Cogeneration & On-site Generation	Philadelphia, PA	<a href="http://www.aeecenter.org/seminars">www.aeecenter.org/seminars</a>
26-27	2nd Annual Fuel Cell Investor	New York, NY	<a href="http://www.srinstitute.com/cr218">www.srinstitute.com/cr218</a>
27-28	GLOBALCON Energy/Facilities Management Conference & Expo	Philadelphia, PA	<a href="http://www.aeecenter.org/seminars">www.aeecenter.org/seminars</a>

Laboratory (CERL) has issued a Broad Agency Announcement soliciting proposals for PEM Fuel Cell Demonstration of Domestically Produced Residential PEM Fuel Cells in Military Facilities. Only domestically-produced residential PEM fuel cells between the sizes of 1 kW and 20 kW will be considered. Pre-proposals must be submitted by March 29, 2002 to be considered for the approximately \$3 million funding anticipated to be available for FY2002.

[www.mvk.usace.army.mil/contract/docs/FY02FuelCellBAA.pdf](http://www.mvk.usace.army.mil/contract/docs/FY02FuelCellBAA.pdf)

EPA's Landfill Methane Outreach Program (LMOP) has issued a solicitation for pre-proposal applications that build upon LMOP's efforts to reduce emissions of greenhouse gases through the development of landfill gas use projects. LMOP anticipates making one or more awards, ranging in value from approximately \$15,000 to \$75,000. Pre-proposals are due by April 19, 2002.

[www.epa.gov/lmop/pdf/grantsolicit02.pdf](http://www.epa.gov/lmop/pdf/grantsolicit02.pdf)

The South Coast Air Quality Management District has issued a Program Opportunity Notice for Technology Advancement, which covers stationary fuel cells, fuel cell vehicles, off-road alternative fuel vehicles, and other advanced technology topics. Funding for projects will range from \$100,000 to \$1,000,000. Pre-proposals are due by May 31, 2002.

[http://www.aqmd.gov/rfp/pon2002\\_01.html](http://www.aqmd.gov/rfp/pon2002_01.html)

*The potential for electricity generated by wind and clean biomass resources is 12.5 billion kWh.\**

## Calendar of Events

APRIL 2002			
2-3	Implementing Renewable Energy Projects	Washington, DC	Gail Norby, (303) 526-5528, gail@imaginitech.com
3-4	The 2002 Hydrogen Investment Forum	Washington, DC	www.intertechusa.com
8-9	Colorado Wind and Distributed Energy: Renewables for Rural Prosperity	Denver, CO	www.state.co.us/oemc
8-9	Fuel Cells and Distributed Power Conference	Stamford, CT	www.bccresearch.com/fuel_cells
15-17	EESAT 2002, Electric Energy Storage—Applications and Technologies	San Francisco, CA	www.sandia.gov/EESAT; Dr. Imre Gyuk (202) 586-1482
21-23	4th Annual Small Fuel Cells Conference	Washington, DC	custserv@knowledgefoundation.com
30-May2	Houston Energy Expo	Houston, TX	www.nesanel.org
MAY 2002			
1-3	External Combustion Engines—New Strategies for Efficient, Green Power Generation	Los Angeles, CA	chuck@intertechusa.com
2	Green Power: Turn it On! Getting to 10% Conference	Harrisburg, PA	Maryanne Daniel; 215-656-6964
14-16	E-Vision 2002: Shaping Our Future by Reducing Energy Intensity in the U.S. Economy	Arlington, VA	Jeff Dowd; jeff.dowd@ee.doe.gov
23-24	FEMP DER Workshop	Atlanta, GA	Lisa Hollingsworth 404-562-0569
JUNE 2002			
2-5	Energy 2002 Workshop and Expo: Hot Challenges, Cool Solutions	Palm Springs, CA	(703) 243-8343, www.energy2002.ee.doe.gov
6-7	West Coast Energy Management Congress	Anaheim, CA	(703) 243-8343, www.aeecenter.org
16-18	National Accounts Conference and Exhibition (American Gas Association)	Nashville, TN	TheGasChoice.com
26-29	Building Energy 2002 and the Mid-Atlantic Sustainability Conference	East Brunswick, NJ	www.nesea.org
AUGUST 2002			
18-23	Summer Study on Energy Efficiency in Buildings	Pacific Grove, CA	www.aceee.org

\* Source: Bangor Daily News, Bangor, Maine (accessed via [www.energycentral.com](http://www.energycentral.com))